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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/662,150	09/14/2000	Shigeaki Tochimoto	54024-022	9616

7590 01/28/2003

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600 13th Street NW  
Washington, DC 20005

EXAMINER

DEL SOLE, JOSEPH S

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 01/28/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/662,150

Applicant(s)

TOCHIMOTO ET AL.

Examiner

Joseph S. Del Sole

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 January 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-4, 12, 22-25 and 28-32 is/are pending in the application.
- 4a) Of the above claim(s) 25 and 28-32 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12, 23 and 24 is/are allowed.
- 6) ☒ Claim(s) 2-4 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Claims 25 and 28-32 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method, there being no allowable generic or linking claim. Election was made without the indication of traverse in Paper No. 5.

### ***Claim Objections***

2. Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. This claim only recites the materials being jetted by the nozzles or head and the method of applying and therefore do not limit the apparatus structurally. Inclusion of the material worked upon by a structure being claimed does not impart patentability to the claims, *In re Otto et al.*, 136 USPQ 458. Intended use has been continuously held not to be germane to determining the patentability of the apparatus, *In re Finsterwalder*, 168 USPQ 530. Purpose to which apparatus is to be put and expression relating apparatus to contents thereof during intended operation are not significant in determining patentability of an apparatus claim, *Ex parte Thibault*, 164 USPQ 666. A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the structural limitation of that claimed, *Ex parte Masham*, 2 USPQ 2d 1647. The manner or method in which a machine is to be utilized is not germane to the issue of patentability of the machine

itself, In re Casey, 152 USPQ 235. See also MPEP 2114 wherein it states that the apparatus must be distinguished from the prior art in terms of structure rather than function. Nozzles and heads are structures, they only differ in the function of their use if they are used to process materials having different colors.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 2-4 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Cima et al (5,387,380).

Cima et al teach an apparatus for forming a three-dimensional product, the apparatus having a layer forming mechanism for forming a layer of material (Fig 1, #13 or Fig2A, #41); an applying head (Fig 1, #15 or Fig 2B, #43 and #43A) for applying plural kinds of materials to the layer; a controller for controlling the applying head to apply materials selectively to a predetermined region on the layer (col 3, lines 2-14 and col 4, lines 12-28); the controller controls the applying head to applying one material after another material (col 12, lines 3-10); the controller controls the applying head such that the applying head can apply binder and ink; the controller controls the applying head so that an amount of the material applied to a predetermined region is constant per unit area of main surface on the layer (the specification addresses the uniformity of the materials being layered including col 4, lines 4-28 which shows that the applying

head moves at a constant speed and col 12, lines 1-2 which shows that the material travels through the applying head at a constant speed, the combination of which results in a constant amount of material per unit area).

Regarding the use of one material that becomes stable faster than another material after the another material is applied to the layer, this amounts to an intended use of the apparatus and has no patentable weight. Intended use has been continuously held not to be germane to determining the patentability of the apparatus, In re Finsterwalder, 168 USPQ 530. Purpose to which apparatus is to be put and expression relating apparatus to contents thereof during intended operation are not significant in determining patentability of an apparatus claim, Ex parte Thibault, 164 USPQ 666. Inclusion of the material worked upon by a structure being claimed does not impart patentability to the claims, In re Otto et al., 136 USPQ 458. A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the structural limitation of that claimed, Ex parte Masham, 2 USPQ 2d 1647. The manner or method in which a machine is to be utilized is not germane to the issue of patentability of the machine itself, In re Casey, 152 USPQ 235. See also MPEP 2114 wherein it states that the apparatus must be distinguished from the prior art in terms of structure rather than function.

***Allowable Subject Matter***

5. Claims 12, 23-24 allowed.

6. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to teach the limitations of claim 23 as stated in the previous Office action and furthermore the prior art of record fails to teach detectors for detecting an amount of each of the plurality of binders remaining in each plurality of tanks, wherein the controller controls the applying head to apply binder which has the greatest remaining amount to the non-coloring agent.

***Response to Arguments***

7. Applicant's arguments filed 1/13/03 have been fully considered but they are not persuasive.

The only objection remaining for failure to further limit the previous claim is drawn to dependent claim 4. The Applicant argues that the limitation is significant and affects the apparatus. Further the Applicant argues that In re Otto relates to issues of obviousness and not proper dependency.

The Examiner disagrees. First of all, the limitation contained in claim 4 addresses the order of which the binder and ink are applied. The structure of the apparatus is no different if the binder is applied first or if the ink is applied first, and therefore this limitation does not affect the structure of the apparatus and is not further limiting. Second of all, In re Otto states that: "Inclusion of the material worked upon by a structure being claimed does not impart patentability to the claims" and hence In re Otto is drawn to what is and what is not a patentable limitation. If a limitation is not patentable, then the limitation is not further limiting. In this case, whether the apparatus works on binder or ink does not make the apparatus patentable and hence is not

limiting. The Examiner would like to again draw the Applicant's attention to the other cases cited in paragraph 3 of the previous Office action, including: In re Finsterwalder, 168 USPQ 530; Ex parte Thibault, 164 USPQ 666; Ex parte Masham, 2 USPQ 2d 1647; In re Casey, 152 USPQ 235 and also MPEP 2114. All of these cases and this section of the MPEP address the issue of what is patentable subject matter for an apparatus claim. Such recitations show that the limitation of claim 4, as well as the limitations of claim 2 discussing the order of materials applied and the stability achieving nature of each and of claim 3 discussing the materials applied, are not patentable limitations in an apparatus claim and hence do not further limit the apparatus claim. The objection to claim 4 stands.

The Applicant argues, with regard to claim 2, that Cima et al fails to anticipate "said controller controls said applying head to apply on material included in said plural kinds of materials after application of another material, with said another material becoming stable faster than said one material after applied to said layer".

The Examiner disagrees. In so much as Cima et al may not teach this intended use (discussed above as not a patentable limitation in an apparatus claim), Cima et al does teach an apparatus with a controller capable of performing this intended use and therefore 35USC102 is satisfied.

The Applicant argues, with regard to claim 3, that Cima et al fails to anticipate "said controller controls said applying head to apply binder and ink".

The Examiner disagrees. First of all, Cima et al does teach both binder and ink being applied by and applying head (col 4, lines 12-43 discuss ink-heads that can also

jet binder material). Second of all, as discussed above, this is not a patentable limitation in an apparatus claim; however, it is clear that the apparatus of Cima et al is capable of jetting binder and/or ink and therefore 35USC 102 is satisfied.

The Applicant argues that the limitations of claim 12 are not taught.

The Examiner agrees, the rejection to claim 12 has been withdrawn and claim 12 has been found allowable.

The Applicant argues, with regard to claim 22, that Cima et al fails to anticipate "the controller controls said applying head to apply binder which has the greatest remaining amount to said non-coloring region".

The Examiner agrees, however this is not a limitation of claim 22 (it is a limitation only of claim 12) and therefore the patentability of this limitation has no bearing on claim 22. Furthermore, as discussed above, Cima et al does disclose the controller now recited in amended claim 22 and claim 22 is rejected.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the



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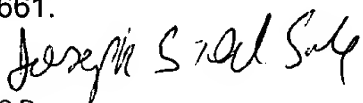
shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph S. Del Sole whose telephone number is (703) 308-6295. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Wanda Walker, can be reached at (703) 308-0457. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 for non-after finals and (703) 872-9311 for after finals.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

  
J.S.D.  
January 24, 2003

  
ROBERT DAVIS  
PRIMARY EXAMINER  
GROUP 1380 1722

1/24/03